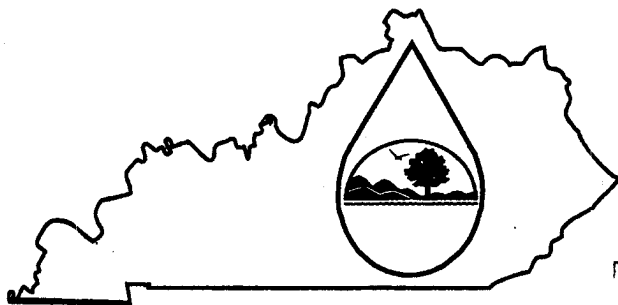


KPDES FORM 1



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

2003 SEP 18 P 1:04

PERMIT APPLICATION

RECEIVED BY KPDES BRANCH

This is an application to: (check one)

- ☐ Apply for a new permit.
☒ Apply for reissuance of expiring permit.
☐ Apply for a construction permit.
☐ Modify an existing permit.

Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:

Form A, Form B, Form C, Form F, or Short Form C

For additional information contact:

KPDES Branch (502) 564-3410

I. FACILITY LOCATION AND CONTACT INFORMATION		AGENCY USE							
A. Name of business, municipality, company, etc. requesting permit Carbide Industries LLC									
B. Facility Name and Location					C. Facility Owner/Mailing Address				
Facility Location Name: Calvert City Plant					Owner Name: Carbide Industries LLC				
Facility Location Address (i.e. street, road, etc.): 3204 Industrial Parkway					Mailing Street: P. O. Box 67				
Facility Location City, State, Zip Code: Calvert City, Kentucky 42029					Mailing City, State, Zip Code: Calvert City, Kentucky 42029				
					Telephone Number: 270-395-4143				
II. FACILITY DESCRIPTION									
A. Provide a brief description of activities, products, etc: The Calvert City Plant produces acetylene, calcium carbide, carbon products and calcium hydroxide for industrial and commercial uses.									
B. Standard Industrial Classification (SIC) Code and Description									
Principal SIC Code & Description:		2869 Calcium Carbide							
Other SIC Codes:				2813 Acetylene		3274 Calcium Hydroxide			
III. FACILITY LOCATION									
A. Attach a U.S. Geological Survey 7 1/2 minute quadrangle map for the site. (See instructions)									
B. County where facility is located: Marshall					City where facility is located (if applicable): Calvert City				
C. Body of water receiving discharge: Tennessee River									
D. Facility Site Latitude (degrees, minutes, seconds): 37° 3' 12"					Facility Site Longitude (degrees, minutes, seconds): 88° 20' 31"				
E. Method used to obtain latitude & longitude (see instructions):					Topo Map Coordinates				
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable):					12-361-2264				

IV. OWNER/OPERATOR INFORMATION**A. Type of Ownership:**

☐ Publicly Owned ☐ Privately Owned ☐ State Owned ☐ Both Public and Private Owned ☐ Federally owned

B. Operator Contact Information (See instructions)

Name of Treatment Plant Operator:

Telephone Number:

Operator Mailing Address (Street):

Operator Mailing Address (City, State, Zip Code):

Is the operator also the owner?

Yes ☐ No ☐

Is the operator certified? If yes, list certification class and number below.

Yes ☐ No ☐

Certification Class:

Certification Number:

V. EXISTING ENVIRONMENTAL PERMITS

Current NPDES Number:

KY-0003549

Issue Date of Current Permit:

June 1, 2000

Expiration Date of Current Permit:

February 29, 2004

Number of Times Permit Reissued:

Four

Date of Original Permit Issuance:

April 1, 1983

Sludge Disposal Permit Number:

N/A

Kentucky DOW Operational Permit #:

N/A

Kentucky DSMRE Permit Number(s):

N/A

C. Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	Operating Permit 086-102 (Duplicate)	N/A
Solid or Special Waste	N/A	N/A
Hazardous Waste - Registration or Permit	N/A	N/A

VI. DISCHARGE MONITORING REPORTS (DMRs)

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). The information in this section serves to specifically identify the department, office or individual you designate as responsible for submitting DMR forms to the Division of Water.

A. Name of department, office or official submitting DMRs:

Sheri Guthrie, Plant Manager

B. Address where DMR forms are to be sent. (Complete only if address is different from mailing address in Section I.)

DMR Mailing Name:

Carbide Industries LLC

DMR Mailing Street:

3204 Industrial Parkway

DMR Mailing City, State, Zip Code:

Calvert City, Kentucky 42029

DMR Official Telephone Number:

270-395-41433

VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount. Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:

Minor Facility

Filing Fee Enclosed:

\$420.00

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

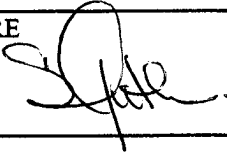
NAME AND OFFICIAL TITLE (type or print):

Sheri Guthrie, Plant Manager

TELEPHONE NUMBER (area code and number):

(270) 395-4143 ext. 223

SIGNATURE



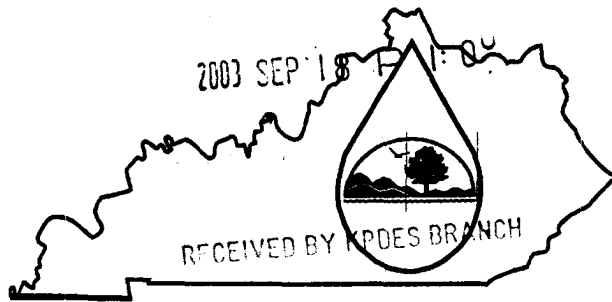
DATE:

9-12-03

KPDES FORM C

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION



A complete application consists of this form and Form 1.
For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility: Carbide Industries LLC	County: Marshall
I. OUTFALL LOCATION	AGENCY USE

For each outfall list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
001	37	03	31	88	20	20	Tennessee River
002	37	03	27	88	20	12	Tennessee River
003	37	02	57	88	21	08	Unnamed Tributary to the Tennessee River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

- A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfall. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.
- B. For each outfall, provide a description of: (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
001	Filter backwash	0.417 MGD	None	
	Stormwater loading	8.3 Acres		
002	Recycle pond	0.0 MGD	pH adjustment	2-K
	Emergency overflow	(as needed)		
	Stormwater Loading	96.7 Acres		
003	Stormwater loading	96.0 Acres	pH adjustment	2-K
	Vehicle wash	0.0005 MGD		
	Boiler blow-down	0.0001 MGD		
	cooling tower bleed-off	0.014 MGD		
	Acetylene Condensate	0.000075 MGD		

Revised June 1999

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued)

C. Except for storm water runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ Yes (Complete the following table.)

☒ No (Go to Section III.)

OUTFALL NUMBER (list)	OPERATIONS CONTRIBUTING FLOW (list)	FREQUENCY		Flow Rate (in mgd)		FLOW Total volume (specify with units)		Duration (in days)
		Days Per Week	Months Per Year					
		(specify average)	(specify average)	Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily	
002	Emergency overflow	As needed	As needed	0	0	0	0	As needed

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ Yes (Complete Item III-B) List effluent guideline category:

☒ No (Go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measures of operation)?

☐ Yes (Complete Item III-C)

☐ No (Go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents the actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

MAXIMUM QUANTITY			Affected Outfalls (list outfall numbers)
Quantity Per Day	Units of Measure	Operation, Product, Material, Etc. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any federal, state or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders and grant or loan conditions.

☐ Yes (Complete the following table)

☒ No (Go to Item IV-B)

IDENTIFICATION OF CONDITION AGREEMENT, ETC.	AFFECTED OUTFALLS		BRIEF DESCRIPTION OF PROJECT	FINAL COMPLIANCE DATE	
	No.	Source of Discharge		Required	Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge of or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (Identify the test(s) and describe their purposes below)

☒ No (Go to Section VIII)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

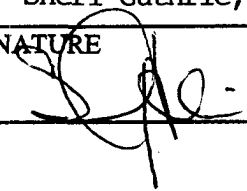
☒ Yes (list the name, address, and telephone number of, and pollutants analyzed by each such laboratory or firm below)

☐ No (Go to Section IX)

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)
Analytical Insustrial 2nd Quarter 1997 to present)	PO Box 3327, Paducah, KY 42002- 3327	(270) 898-8683	TSS, pH, Oil & Grease
Ireland Labs (1st Qtr 1996 to 1st Qtr 1997)	5702 Schneider Road Metropolis, IL 62960- 0980	(618) 524-4115	TSS, pH, Oil & Grease
McCoy & McCoy Laboratories	P. O. Box 907 East Noel Madisonville, KY 42431	(270) 821-7375	TSS, pH, Oil & Grease, priority pollutants

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print): Sheri Guthrie, Plant Manager	TELEPHONE NUMBER (area code and number): (270) 395-4143 Ext. 223
SIGNATURE 	DATE 9-12-03

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered 5-18.

D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

POLLUTANT	SOURCE	POLLUTANT	SOURCE

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you use or produce, or expect to use or produce over the next 5 years as an immediate or final product or byproduct?

☐

Yes (List all such pollutants below)

☒

No (Go to Item VI-B)

--

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharge of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐

Yes (Complete Item VI-C)

☒

No (Go to Item VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail to the best of your ability at this time the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years. Continue on additional sheets if you need more space.

--

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.
(See instructions)

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C)										OUTFALL NO. 001			
Part A -- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.													
1. POLLUTANT		2. EFFLUENT						3. UNITS (Specify if blank)		4. INTAKE (Optional)			
		a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
		(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
2. Biochemical Oxygen Demand (BOD)		10	15.8					1	Mg/l	Kg/day			
b. Chemical Oxygen Demand (COD)		60	110					1	Mg/l	Kg/day			
c. Total Organic Carbon (TOC)		6	11.0					1	Mg/l	Kg/day			
d. Total Suspended Solids (TSS)		7	9.5			6	9.5	2	Mg/l	Kg/day			
e. Ammonia (as N)		ND						1	Mg/L	Kg/day			
f. Flow (in units of MGD)		VALUE		VALUE		VALUE			MGD		VALUE		
g. Temperature (winter)		VALUE		VALUE		VALUE					VALUE		
h. Temperature (Summer)		VALUE		VALUE		VALUE					VALUE		
i. pH		MINIMUM 7.6	MAXIMUM 7.7	MINIMUM	MAXIMUM			2	STANDARD UNITS				

Part B-- In the MARK "X" column, place an "X" in the *Believed Present* column for each pollutant you know or have reason to believe is present. Place an "X" in the *Believed Absent* column for each pollutant you believe to be absent. If you mark the *Believed Present* column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

[illegible]

Part C -- If you are a primary industry and this cutoffl contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for all toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

[illegible]

Part C -- Continued

[illegible]

Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. MAX "C"			3. EFFLUENT						4. UNITS		5. DRYWE (optional)			
	a. Testing Required	b. Tested Present	c. Tested Absent	Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
9V. Chloroethane (74-00-3)			X												
10V. 2-Chloro- ethyl Vinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichloro- bromomethane (75-71-8)			X												
14V. 1,1- Dichloroethane (75-34-3)			X												
15V. 1,2- Dichloroethane (107-06-2)			X												
16V. 1,1- Dichloroethylene (75-35-4)			X												
17V. 1,2- Dichloropropane (78-87-5)			X												
18V. 1,3- Dichloropro- pylene (452-75-6)			X												
19V. Ethyl- benzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												

Part C -- Continued

1. POLLUTANT AND CAS NO. (If available)	2. MARK "X"			3. EFFLUENT						4. LIMITS		5. DRY/KE (optional)			
	a. Testing Method	b. Noted Present	c. Noted Absent	a. Medium Duty Value		b. Medium 30 day Value (If available)		c. Long Term Avg. Value (If available)		d. No. of Analyses	a. Concentration	b. Mils	a. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mils	(1) Concentration	(2) Mils	(1) Concentration	(2) Mils				(1) Concentration	(2) Mils	
21V. Methyl Chloride (74-87-3)			X												
22V. Methylene Chloride (75-00-2)			X												
23V. 1,1,2,2-Tetrachloro-ethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127018-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-TRANS-DICHLORO-ETHYLENE (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V. Trichloro-ethylene (79-01-6)			X												
30V. Vinyl Chloride (75-01-4)			X												

Part C -- Continued

[illegible]

Continued

[illegible]

Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. NAME "X"			3. EFFLUENT										4. UNITS		5. DRIWE (Optional)	
	Testing Required	Banned Present	Banned Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	Long-Term Avg. Value		b. No. of Analyses		
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass			
C/CMS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																	
248. Dimethyl Phthalate (131-11-3)			X														
258. Di-N-butyl Phthalate (84-74-2)			X														
268. 2,4-Dinitro-toluene (121-14-2)			X														
278. 2,6-Dinitro-toluene (606-20-2)			X														
288. Di-n-octyl Phthalate (117-84-0)			X														
298. 1,2-diphenyl-hydrazine (as azobenzene) (122-66-7)			X														
308. Fluoranthene (208-44-0)			X														
318. Fluorene (86-73-7)			X														
328. Hexachloro-benzene (118-71-1)			X														
338. Hexachloro-butadiene (87-68-3)			X														
348. Hexachloro-cyclopentadiene (77-47-4)			X														

Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UCLTS		5. DTIME (optional)			
	Testing Method	Detected Present	Detected Absent	a. Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	Concentration	b. Ness	a. Long-Term Avg. Value		b. No. of Analyses		
				(1) Concentration	(2) Ness	(1) Concentration	(2) Ness	(1) Concentration	(2) Ness				(1) Concentration	(2) Ness			
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																	
358. Hexachloroethane (67-72-1)			X														
368. Indeno-(1,2,3-cd)-Pyrene (193-39-5)			X														
378. Isophorone (78-59-1)			X														
388. Naphthalene (91-20-3)			X														
398. Nitrobenzene (98-95-3)			X														
408. N-Nitrosodimethylamine (62-75-9)			X														
418. N-Nitrosodipropylamine (621-64-7)			X														
428. N-nitrosodiphenylamine (86-30-6)			X														
438. Phenanthrene (85-01-8)			X														
448. Pyrene (129-00-0)			X														
458. 1,2,4 Tri-chlorobenzene (120-82-1)			X														

Part C — Continued

[illegible]

Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. NAME "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	Toxicity Ranking	Listed Pollutant Present	Listed Pollutant Absent	a. Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analytes	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analytes
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION -- PESTICIDES, (Continued)															
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

KPDES OUTFALL 002

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.
(See instructions)

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form Q)											OUTFALL NO. 002	
Part A -- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.												
1. POLLUTANT	2. EFFLUENT						3. UNITS (Specify if blank)		4. INTAKE (Optional)			
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)												
b. Chemical Oxygen Demand (COD)												
c. Total Organic Carbon (TOC)												
d. Total Suspended Solids (TSS)	11	5.2			6.33	3.0	3	Mg/l	kg/day			
e. Ammonia (as N)												
f. Flow (in units of MGD)	VALUE 0.1254		VALUE 0.1254		VALUE		3	MGD				
g. Temperature (winter)	VALUE		VALUE		VALUE					VALUE		
h. Temperature (summer)	VALUE				VALUE					VALUE		
i. pH	MINIMUM 6.6	MAXIMUM 7.5	MINIMUM	MAXIMUM			3	STANDARD UNITS				

Outfall 002 under most conditions does not flow. In fact, the recycle pond usually operates in water deficit.

Part B -- Continued

[illegible]

Part C -- If you are **primary** industry and this cutoffl contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for **All** toxic metals, cyanides, and total phenols. If you are not required to mark this column (*secondary industries nonprocess wastewater*), and *non-required GC/MS fractions*, mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each cutoffl. See instructions for additional details and requirements.

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Part C -- Continued

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Part C -- Continued

1. POLLUTANT NO. CAS NO. (if available)	2. REACT "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	2a Testing Required	2b Detected Present	2c Detected Absent	a. Medium Duty Value		b. Medium 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	e. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
9V. Chloroethane (74-00-3)			X												
10V. 2-Chloro- ethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichloro- bromomethane (75-71-8)			X												
14V. 1,1- Dichloroethane (75-34-3)			X												
15V. 1,2- Dichloroethane (107-06-2)			X												
16V. 1,1- Dichloroethylene (75-35-4)			X												
17V. 1,2- Dichloropropane (78-87-5)			X												
18V. 1,3- Dichloropro- pylene (452-75-6)			X												
19V. Ethyl- benzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												

Part C -- Continued

1. POLLUTANT (if available)	2. NAME "X"		3. EFFLUENT										4. LIMITS		5. DRYWE (optional)			
			a. Testing Required	b. Tested Present	c. Tested Absent	a. Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses					a. Concentration	b. Mass
						(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass							
21V. Methyl Chloride (74-87-3)			X															
22V. Methylene Chloride (75-00-2)			X															
23V. 1,1,2,2- Tetrachloro- ethane (79-34-5)			X															
24V. Tetrachloro- ethylene (127018-4)			X															
25V. Toluene (108-88-3)			X															
26V. 1,2-Trans- dichloro- ethylene (156-60-5)			X															
27V. 1,1,1-Trifluoro- chloroethane (71-55-6)			X															
28V. 1,1,2-Trifluoro- chloroethane (79-00-5)			X															
29V. Trichloro- ethylene (79-01-6)			X															
30V. Vinyl Chloride (75-01-4)			X															

Part C -- Continued

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Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. MAX "X"			3. EFFLUENT								4. LIMITS		5. DETAIL (optional)		
	a. Testing Required	b. Testing Present	c. Testing Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																
24B. Dimethyl phthalate (131-11-3)			X													
25B. Di-n-butyl phthalate (84-74-2)			X													
26B. 2,4-Dinitro-toluene (121-14-2)			X													
27B. 2,6-Dinitro-toluene (606-20-2)			X													
28B. Di-n-octyl Phthalate (117-84-0)			X													
29B. 1,2-diphenyl-hydrazine (as azobenzene) (122-66-7)			X													
30B. Fluoranthene (208-44-0)			X													
31B. Fluorene (86-73-7)			X													
32B. Hexachloro-benzene (118-71-1)			X													
33B. Hexachloro-butadiene (87-68-3)			X													
34B. Hexachloro-cyclopentadiene (77-47-4)			X													

Part C -- Continued

1. POLLUTANT NO. (If available)	2. MAX. TC			3. EFFLUENT						4. UNITS		5. DTIME (optional)				
	Testing Method	Believed Present	Believed Absent	a. Maximum Daily Value		b. Maximum 30-day Value (If available)		c. Long-Term Avg. Value (If available)		d. No. of Analyses	Concentration	b. NSS	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) NSS	(1) Concentration	(2) NSS	(1) Concentration	(2) NSS				(1) Concentration	(2) NSS		
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																
356. Hexachloro- cyclopentadiene (67-72-1)			X													
366. Indeno- (1,2,3-cd)- Pyrene (193-39-5)			X													
376. Isophorone (78-59-1)			X													
386. Naphthalene (91-20-3)			X													
396. Nitro- benzene (98-95-3)			X													
406. N-nitroso- dimethyl- amine (62-75-9)			X													
416. N-nitrosodi- n- propylamine (621-64-7)			X													
426. N-nitro- sodiphenyl- amine (86-30-6)			X													
436. Phenanthrene (85-01-8)			X													
446. Pyrene (129-00-0)			X													
456. 1,2,4 Tri- chloro- benzene (120-82-1)			X													

Continued

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Part C -- Continued

1. POLLUTANT NO. (If available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. DTIME (optional)			
	a. Testing Required	b. Testing Present	c. Testing Absent	a. Maximum Daily Value		b. Maximum 30-day Value (If available)		c. Long-Term Avg. Value (If available)		d. No. of Analyses	a. Concentration	b. Mass	2. Long-Term Avg. Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
GC/MS FRACTION -- PESTICIDES, (Continued)															
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

KPDES OUTFALL 003

OUTFALL NO. 003

1. POLLUTANT	2. EFFLUENT	3. UNITS (specify if blank)	4. INTAKE (optional)
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1. POLLUTANT		2. ANALYTICAL DATA						3. QUALITY CRITERIA					
		a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	e. Concentration	f. Mass	g. Long-Term Avg. Value		h. No. of Analyses
		(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a.	Biochemical Oxygen Demand (BOD)	10	154					1	Hg/l	Kg/day			
b.	Chemical Oxygen Demand (COD)	60	926					1	Hg/l	Kg/day			
c.	Total Organic Carbon (TOC)	6	93					1	Hg/l	Kg/day			
d.	Total Suspended Solids (TSS)	4	3397			31	5	1/month	Hg/l	Kg/day			
e.	Ammonia (as N)	ND						1	Hg/l	Kg/day			
f.	Flow (in units of MGD)	VALUE 4.080		VALUE		VALUE 1.20		14	MGD		VALUE		
g.	Temperature (winter)	VALUE		VALUE		VALUE		1	°C		VALUE		
h.	Temperature (Summer)	VALUE		VALUE		VALUE		1	°C		VALUE		
i.	pH	MINIMUM 6.0	MAXIMUM 8.8	MINIMUM	MAXIMUM			14	STANDARD UNITS				

Part C -- If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for all toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X" in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. DRYWE (optional)				
	a. Testing Required	b. Believed Present	c. Believed Absent	a. Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	e. Concentration	f. Mass	Long-Term Avg. Value		g. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
METALS, CYANIDE AND TOTAL PHENOLS																
1M. Antimony, Total (7440-36-0)	X			ND						1						
2M. Arsenic, Total (7440-38-2)	X			ND						1						
3M. Beryllium, Total (7440-41-7)	X			ND						1						
4M. Cadmium, Total (7440-43-9)	X			ND						1						
5M. Chromium, Total (7440-43-9)	X			ND						1						
6M. Copper, Total (7550-50-8)	X			ND						1						
7M. Lead, Total (7439-92-1)	X			ND						1						
8M. Mercury, Total (7439-97-6)	X			ND						1						
9M. Nickel, Total (7440-02-0)	X			ND						1						
10M. Selenium, Total (7782-49-2)	X			ND						1						
11M. Silver, Total (7440-28-0)	X			ND						1						

Part C -- Continued

1. POLLUTANT AND CAS NO. (If available)	2. NAME "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. Testing Required	b. Noted Present	c. Noted Absent	a. Maximum Daily Value		b. Maximum 30-day Value (If available)		c. Long-Term Avg. Value (If available)		d. No. of Analyses	e. Concentration	f. Mass	g. Long-Term Avg. Value		h. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS (Continued)															
12M. Thallium, Total (7440-28-0)	X			ND						1					
13M. Zinc, Total (7440-66-0)	X			0.052	0.8					1	MG/L	KG/day			
14M. Cyanide, Total (57-12-5)	X			ND						1					
15M. Phenols, Total	X			ND						1					
DIOXIN															
2,3,7,8 Tetra-chlorodibenzo P, Dioxin (1784-01-6)	X			DESCRIBE RESULTS											
GC/MS FRACTION -- VOLATILE COMPOUNDS															
1V. Acro[isin (107-02-8)	X			ND						1					
2V. Acrylonitrile (107-13-1)	X			ND						1					
3V. Benzene (71-43-2)	X			ND						1					
5V. Bromoform (75-25-2)	X			ND						1					
6V. Carbon Tetrachloride (56-23-5)	X			ND						1					
7V. Chloro-benzene (108-90-7)	X			ND						1					
8V. Chlorodibromomethane (124-48-1)	X			ND						1					

Part C -- Continued

1. PULPANT AND OS (if available)	2. MAX "X"			3. EFFLUENT								4. UNITS		5. DRYWE (optional)		
	Testing Required	Notified Present	Notified Absent	Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
9V. Chloroethane (74-00-3)	X			ND						1						
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X			ND						1						
11V. Chloroform (67-66-3)	X			ND						1						
12V. Dichloro-bromomethane (75-71-8)	X			ND						1						
14V. 1,1-Dichloroethane (75-34-3)	X			ND						1						
15V. 1,2-Dichloroethane (107-06-2)	X			ND						1						
16V. 1,1-Dichloroethylene (75-35-4)	X			ND						1						
17V. 1,2-Dichloropropane (78-87-5)	X			ND						1						
18V. 1,3-Dichloropropylene (452-75-6)	X			ND						1						
19V. Ethylbenzene (100-41-4)	X			ND						1						
20V. Methyl Bromide (74-83-9)	X			ND						1						

Part C -- Continued

1. RECIPIENT and CAS NO. (if available)	2. REACTANT			3. EFFLUENT								4. LIMITS		5. DATA (optional)		
	Testing Method	Solvent Present	Solvent Absent	a. Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	Concentration	Mass	Long-Term Avg. Value		No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
21V. Methyl chloride (74-87-3)	X			ND						1						
22V. Methylene chloride (75-00-2)	X			ND						1						
23V. 1,1,2,2- tetrachloro- ethane (79-34-5)	X			ND						1						
24V. tetrachloro- ethylene (127018-4)	X			ND						1						
25V. Toluene (108-88-3)	X			ND						1						
26V. 1,2-Trans- dichloro- ethylene (156-60-5)	X			ND						1						
27V. 1,1,1-Trifluoro- chloroethane (71-55-6)	X			ND						1						
28V. 1,1,2-Trifluoro- chloroethane (79-00-5)	X			ND						1						
29V. Trichloro- ethylene (79-01-6)	X			ND						1						
30V. Vinyl chloride (75-01-4)	X			ND						1						

Part C -- Continued

1. POLLUTANT (If available)	2. NAME "C"			3. EFFLUENT						4. UNITS		5. IYTIME (optional)				
	a. Testing Required	b. Tested Present	c. Tested Absent	a. Maximum Daily Value		b. Maximum 30-day Value (If available)		c. Long-Term Avg. Value (If available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																
28. Acena- phyrene (208-96-8)	X					ND				1						
38. Anthracene (120-12-7)	X					ND				1						
48. Benzidine (92-87-5)	X					ND				1						
58. Benzo(a)- anthracene (56-55-3)	X					ND				1						
68. Benzo(a)- pyrene (50-32-8)	X					ND				1						
78. 3,4-Benzo- fluoranthene (205-99-2)	X					ND				1						
88. Benzo(ghi) perylene (191-24-2)	X					ND				1						
98. Benzo(k)- fluoranthene (207-08-9)	X					ND				1						
108. Bis(2-chloro- methoxy)- methane (111-91-1)	X					ND				1						
118. Bis(2-chloro- isopropyl)- Ether	X					ND				1						
128. Bis(2-ethyl- hexyl)- phthalate (117-81-7)	X					ND				1						

Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. DURATION (optional)		
	Testing Sampling	Solvent Present	Solvent Absent	Maximum Daily Value		Maximum 30-day Value (if available)		Long-Term Avg. Value (if available)		4. No. of Analyses	5. Concentration	6. Mass	Long-Term Avg. Value		7. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																
138. 4-Bromo-phenyl ether (101-55-3)	X			ND							1					
148. Butyl-phenyl phthalate (85-68-7)	X			ND							1					
158. 2-Chloro-naphthalene (7005-72-3)	X			ND							1					
168. 4-Chloro-phenyl ether (7005-72-3)	X			ND							1					
178. Chrysene (218-01-9)	X			ND							1					
188. Dibenzo- (a,h) Anthracene (33-70-3)	X			ND							1					
198. 1,2-Dichloro- benzene (95-50-1)	X			ND							1					
208. 1,3-Dichloro- benzene (541-73-1)	X			ND							1					
218. 1,4-Dichloro- benzene (106-46-7)	X			ND							1					
228. 3,3-Dichloro- benzidine (91-94-1)	X			ND							1					
238. Diethyl phthalate (84-66-2)	X			ND							1					

Part C -- Continued

1. POLLUTANT AND CAS NO. (if available)	2. MAX "X"			3. EFFLUENT								4. UNITS		5. DRIWE (optional)		
	a. Testing Required	b. Banned Present	c. Banned Absent	a. Maximum Daily Value		b. Maximum 30-day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																
248. Dimethyl Phthalate (131-11-3)	X			ND							1					
258. Di-N-butyl Phthalate (84-74-2)	X			ND							1					
268. 2,4-Dinitro-toluene (121-14-2)	X			ND							1					
278. 2,6-Dinitro-toluene (606-20-2)	X			ND							1					
288. Di-n-octyl Phthalate (117-84-0)	X			ND							1					
298. 1,2-diphenyl-hydrazine (as azobenzene) (122-66-7)	X			ND							1					
308. Fluoranthene (208-44-0)	X			ND							1					
318. Fluorene (86-73-7)	X			ND							1					
328. Hexachloro-benzene (118-71-1)	X			ND							1					
338. Hexachloro-butadiene (87-68-3)	X			ND							1					
348. Hexachloro-cyclopenta-diene (77-47-4)	X			ND							1					

Part C -- Continued

1. POLLUTANT AND CAS NO. (If available)	2. MARK "X"			3. EFFLUENT								4. UUTS		5. DRIKE (Optional)		
	a. Testing Required	b. Testing Present	c. Testing Absent	a. Maximum Daily Value		b. Maximum 30-day Value (If available)		c. Long-Term Avg. Value (If available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS (Continued)																
358. Hexachloroethane (67-72-1)			X				ND				1					
368. Indeno-1,2,3-cd-Pyrene (193-39-5)			X				ND				1					
378. Isophorone (78-59-1)			X				ND				1					
388. Naphthalene (91-20-3)			X				ND				1					
398. Nitrobenzene (98-95-3)			X				ND				1					
408. N-Nitrosodimethylamine (62-75-9)			X				ND				1					
418. N-Nitrosodipropylamine (621-64-7)			X				ND				1					
428. N-nitrosodiphenylamine (86-30-6)			X				ND				1					
438. Phenanthrene (85-01-8)			X				ND				1					
448. Pyrene (129-00-0)			X				ND				1					
458. 1,2,4 Tri-chlorobenzene (120-82-1)			X				ND				1					

Part C -- Continued

1. POLLUTANT No. (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. DRIWE (optional)				
	a. Testing Required	b. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses	
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass		
GC/MS FRACTION B PESTICIDES																
1P. Aldrin (309-00-2)	X			ND						1						
2P. α -BHC (319-84-6)	X			ND						1						
3P. δ -BHC (58-89-9)	X			ND						1						
4P. gamma-BHC (58-89-9)	X			ND						1						
5P. δ -BHC (319-86-8)	X			ND						1						
6P. Chlordane (57-74-9)	X			ND						1						
7P. 4,4'-DDT (50-29-3)	X			ND						1						
8P. 4,4'-DDE (72-55-9)	X			ND						1						
9P. 4,4'-DDD (72-54-8)	X			ND						1						
10P. Dieldrin (60-57-1)	X			ND						1						
11P. α - Endosulfan (115-29-7)	X			ND						1						
12P. δ - Endosulfan (115-29-7)	X			ND						1						
13P. Endosulfan sulfate (1031-07-8)	X			ND						1						
14P. Endrin (72-20-8)	X			ND						1						

Part C -- Continued													
1. POLLUTANT AND CAS NO. (If available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. DETAIL (optional)	
	a. Testing Required	b. Tested Present	c. Tested Absent	a. Medium Daily Value		b. Medium 30-Day Value (If available)		c. Long-Term Avg. Value (If available)		d. No. of Analyses	Concentration	b. No. of Analyses	a. Long-Term Avg. Value
				(1) Concentration	(2) No.	(1) Concentration	(2) No.	(1) Concentration	(2) No.				
GC/MS FRACTION -- PESTICIDES, (Continued)													
15P. Endrin Aldrin (7421-93-4)	X			ND						1			
16P. Heptachlor (76-44-8)	X			ND						1			
17P. Heptachlor Epoxide (1024-57-3)	X			ND						1			
18P. PCB-1242 (53469-21-9)	X			ND						1			
19P. PCB-1254 (11097-69-1)	X			ND						1			
20P. PCB-1221 (11104-28-2)	X			ND						1			
21P. PCB-1232 (11141-16-5)	X			ND						1			
22P. PCB-1248 (12672-29-6)	X			ND						1			
23P. PCB-1260 (11096-82-5)	X			ND						1			
24P. PCB-1016 (12674-11-2)	X			ND						1			
25P. Toxaphene (8001-35-2)	X			ND						1			

**FACT SHEET FOR
CARBIDE INDUSTRIES LLC
KPDES PERMIT RENEWAL
PERMIT NUMBER KY000359
EFFECTIVE DATE JUNE 1, 2000
EXPIRATION DATE FEBRUARY 29, 2004**

Carbide Industries LLC is a leading producer of calcium carbide products for domestic and international industry. Calcium carbide is used to produce acetylene gas for metal fabrication and construction. Acetylene is used to cut or join many types of metal, cleanse them of surface imperfections, and strengthen them through flame hardening. Acetylene is also a vital ingredient in the manufacture of many specialty chemicals and is widely used as a desulfurization reagent for treating liquid metal in iron foundries and steel plants. Calcium hydroxide is a co-product of the acetylene gas generation process and is used for neutralizing waste pickling acid, for stabilizing soils during road construction, for removing sulfur dioxide from stack gases, and for making sand-lime brick.

KPDES OUTFALL 001

KPDES Outfall 001 is located on the northwest corner of the property. This outfall only flows during some heavy rain events and discharges directly into the Tennessee River. This area drains the property on the northwest corner of the facility, including a portion of property owned by British Oxygen Company (BOC), between CI property and CCMA. This outfall is also permitted to receive discharge from a sanitary sewage treatment system; however, the system has not been installed to date.

KPDES OUTFALL 002

KPDES Outfall 002 is located on the north side of the property. Discharge from this outfall drains directly into the Tennessee River. This outfall was included on the facility KPDES permit to discharge treated water stored in a retention pond located directly south of the outfall. Although no regular discharge occurs from outfall 002, any treated water will be pumped from the treatment system into the river after discharge requirements have been met.

The water stored in the retention pond constitutes a majority of the runoff from the plant proper, and from the surrounding acreage not used in the manufacturing process. This water accumulated in a series of ditches that drain to the retention pond. Most of this water either evaporates once entering the retention pond or is piped to a customer purchasing calcium hydroxide slurry for acid neutralization. Having a water deficit in the retention pond is more common than having a need to treat the water prior to discharge. Under normal conditions, including storm events, this outfall does not discharge. In the event that discharge is necessary, pH control is available.

KPDES OUTFALL 003

KPDES Outfall 003 is located in the southeast corner of the property at the end of a long tributary. This tributary collects water from off-site to the west as well as limited storm water discharges from the Air Products facility adjoining the CI property. Process waters include: boiler blow-down, vehicle wash water, cooling tower bleed and acetylene condensate. Non-process storm water from the south side of the plant, as well as eastern portion of the plant proper, drains to outfall 003 and discharges off-site to the southeast. Discharges from outfall 003 are controlled for pH. This is the only continuous discharge associated with this facility.

Technical Products, Inc.
3900 Tucker Avenue
Louisville, KY 40216
502-448-6200

MATERIAL SAFETY DATA SHEET
MSDS # 96875

Page 1

24 Hour Emergency Assistance	Acute Health	Fire	Reactivity
Chemtrec: 800-424-9300	3	0	2
SAFETY FIRST !			
Hazard: (0) Least (1) Slight (2) Moderate			
Rating: (3) High (4) Extreme			

MSDS # 96875

PRODUCT: SULFURIC ACID 66 DEGREES
8 CORROSIVE, UN1830, PG II

SECTION I

Name

Product.....: SULFURIC ACID, 66 DEGREES

Chemical Name....: SULFURIC ACID, OIL OF VITRIOL

Chemical Family...: MINERAL ACID

Code.....:

SECTION II-A

Product/Ingredients

No.	Composition	Cas No.	Percent
0	SULFURIC ACID	7664-93-9	93+

SECTION II-B

Acute Toxicity Data

No. Composition

ACUTE ORAL LD50

0 SULFURIC ACID

0.155 G/KG (RAT)

No. Composition

ACUTE DERMAL LD50

0 SULFURIC ACID

>3.16 G/KG (RABBIT)

No. Composition

ACUTE INHALATION LD50

0 SULFURIC ACID

347 PPM (RAT)

PRODUCT NAME: SULFURIC ACID 66 DEGREES

MSDS: 96875

Page: 2

SECTION III Health Information

EYE CONTACT
CAUSE SEVERE DAMAGE AND EVEN BLINDNESS VERY RAPIDLY.

SKIN CONTACT
CAUSES BURNS, WITH POSSIBLE DEEP ULCERATION.

INHALATION
MIST CAN CAUSE SEVERE DAMAGE TO NASAL AND RESPIRATORY PASSAGES.

INGESTION
RESULTS IN SEVERE DAMAGE TO MUCOUS MEMBRANES AND DEEP TISSUES. CAN
RESULT IN DEATH ON PENETRATION TO VITAL AREAS.

SIGNS AND SYMPTOMS
SKIN IRRITATION WITH DISCOMFORT OR RASH. EYE IRRITATION WITH DISCOMFORT
TEARING OR BLURRING OF VISION.

AGGREGATED MEDICAL CONDITIONS:
INDIVIDUALS WITH PREEXISTING RESPIRATORY PROBLEMS AND DIGESTIVE DISEASES
MAY BE ADVERSELY AFFECTED BY LOW LEVEL EXPOSURES TO GAS OR MIST.

SECTION IV Occupational Exposure Limits

No.	OSHA	PEL/CEILING	ACGIH	TLV/STEL
	PEL/TWA		TLV/TWA	
0	SULFURIC ACID			
	1 MG/M3		1 MG/M3	3 MG/M3
	Other:			

PRODUCT NAME: SULFURIC ACID 66 DEGREES

MSDS: 96875

Page: 3

SECTION V

Emergency and First/Aid Procedures

EYE CONTACT

FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. FORCIBLY HOLD EYELIDS APART TO INSURE COMPLETE IRRIGATION OF EYE/LID TISSUE. GET IMMEDIATE MEDICAL ATTENTION.

SKIN CONTACT

FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING. GET IMMEDIATE MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES.

INHALATION

REMOVE TO FRESH AIR AND GIVE OXYGEN. IF NOT BREATHING, PERFORM ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.

INGESTION

DRINK COPIOUS AMOUNTS OF WATER OR MILK. DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

NOTE TO PHYSICIAN

CONTINUED WASHING OF THE AFFECTED AREA WITH COLD OR ICED WATER WILL BE HELPFUL IN REMOVING THE LAST TRACES OF SULFURIC ACID. CREAMS OR OINTMENTS SHOULD NOT BE APPLIED BEFORE OR DURING THE WASHING PHASE OF THE TREATMENT.

SECTION VI

Supplimental Health Information

DANGER!!! CORROSIVE, CAUSES SEVERE BURNS TO EYES AND SKIN. VAPOR IS EXTREMELY IRRITATING TO THE RESPIRATORY TRACT.

PRODUCT NAME: SULFURIC ACID 66 DEGREES

MSDS: 96875

Page: 4

=====+
SECTION VII Physical Data
=====+BOILING POINT: 585
(DEG F)MELTING POINT: 7
(DEG F)SPECIFIC GRAVITY: 1.84
(H2O = 1)SOLUBILITY: COMPLETE
(In WATER)VAPOR PRESSURE: <0.3
(MM HG)VAPOR DENSITY: 3.4
(Air = 1)EVAPORATION RATE: <1
(Butyl Acetate = 1)APPEARANCE AND COLOR:
CLEAR TO SLIGHTLY CLOUDY, OILY LIQUID; ODORLESS TO SLIGHTLY PUNGENT.=====+
SECTION VIII Fire and Explosion Hazards
=====+

FLASH POINT AND METHOD: NOT FLAMMABLE, MIGHT IGNITE FLAMMABLES

FLAMMABLE LIMITS % VOLUME IN AIR
LOWER UPPER
N/A N/A

EXTINGUISHING MEDIA

USE DRY CHEMICAL OF CO2 BASE FIRE EXTINGUISHERS TO FIGHT SURROUNDING FIRES. DO NOT USE WATER ON MATERIAL ITSELF, AND APPLY FROM FARTHEST POSSIBLE DISTANCE.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. COOL EXTERIOR OF STORAGE TANKS TO PREVENT VAPOR PRESSURE BUILDUP AND THE RUPTURING OF THE CONTAINER.

PRODUCT NAME: SULFURIC ACID 66 DEGREES

MSDS: 96875

Page: 5

=====+
SECTION VIII Fire and Explosion Hazards (CONTINUED) |
-----+

UNUSUAL FIRE AND EXPLOSION HAZARDS
VIOLENT REACTION WITH WATER. EVOLUTION OF EXPLOSIVE HYDROGEN GAS ON
CONTACT WITH MOST METALS. WILL REACT WITH ORGANIC MATERIAL WITH
EVOLUTION OF HEAT AND DENSE WHITE FUMES.

=====+
SECTION IX Reactivity |
-----+

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
HIGHLY REACTIVE WITH MATERIALS SUCH AS METALS, METAL OXIDES, HYDROXIDES,
NITRATES, AMINES, CARBONATES, AND OTHER ALKALINE MATERIALS. REACTIONS
CAN GENERATE A GREAT DEAL OF HEAT AS DOES THE DILUTION OF ACID WITH H₂O.

HAZARDOUS DECOMPOSITION PRODUCTS
EXPLOSIVE HYDROGEN GAS IS GENERATED BY THE ACTION OF ACID ON MOST METALS
AND MAY ACCUMULATE IN METAL CONTAINERS.

=====+
SECTION X Employee Protection |
-----+

RESPIRATORY PROTECTION
USE NIOSH/MSHA APPROVED, FULL-FACE RESPIRATOR WITH CANISTER APPROVED
FOR SULFURIC ACID VAPOR AND MIST.

PROTECTIVE CLOTHING
WEAR IMPERVIOUS RUBBER GLOVES AND PROTECTIVE CLOTHING TO MINIMIZE SKIN
CONTACT. FULL-FACE SHIELD AND RUBBER FOOTWEAR SHOULD BE USED. ACID
RESISTANT HOOD AND FULL-BODY SUIT IS RECOMMENDED. SAFETY SHOWER
RECOMMENDED IN ALL STORAGE AND HANDLING AREAS.

ADDITIONAL PROTECTIVE MEASURES
PROVIDE VENTILATION TO CONTROL EXPOSURE LEVELS BELOW AIRBORNE EXPOSURE
LIMITS. USE LOCAL EXHAUST VENTILATION.

PRODUCT NAME: SULFURIC ACID 66 DEGREES

MSDS: 96875

Page: 6

SECTION XI

Environmental Protection

SPILL OR LEAK PROCEDURES

EVACUATE ALL UNPROTECTED PERSONNEL. UTILIZE FULL PROTECTIVE CLOTHING, INCLUDING BOOTS AND PROTECTIVE EQUIPMENT. SHUT OFF SOURCE OF LEAK ONLY WHEN SAFE TO DO SO. DIKE AND CONTAIN SPILL TO PREVENT CONTAMINATION OF SEWAGE SYSTEM OR WATERWAY. PUMP INTO MARKED CONTAINERS FOR RECLAMATION OR DISPOSAL. NEUTRALIZE RESIDUE WITH SUITABLE ALKALI SUCH AS SODA ASH OR LIME. THEN FLUSH WITH WATER IN ACCORDANCE WITH APPLICABLE REGULATIONS. SPILLS OF 1000 LBS. OR MORE MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER 1-800-424-8802

WASTE DISPOSAL

SHOULD THIS PRODUCT BECOME A WASTE PRODUCT, DISPOSE OF FOLLOWING ALL FEDERAL, STATE AND LOCAL REGULATIONS.

ENVIRONMENTAL PROTECTION

DIKE AND CONTAIN SPILLS TO PREVENT CONTAMINATION OF GROUND WATER AND SEWER SYSTEM. CALL THE NATIONAL RESPONSE CENTER (1-800-424-8802) IF THE QUANTITY OF ANY COMPONENT SPILLED IS EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITY UNDER "SUPERFUND"

SECTION XII

Special Precautions

ADDITION TO WATER RELEASES HEAT AND CAN RESULT IN VIOLENT BOILING AND SPATTERING. ALWAYS ADD SLOWLY AND IN SMALL AMOUNTS. NEVER ADD WATER TO ACIDS.

PRODUCT NAME: SULFURIC ACID 66 DEGREES

MSDS: 96875

Page: 7

+-----+
| SECTION XIIITransportation Requirements
+-----+DOT (172.101) DOT/IMO (172.102)
CORROSIVE MATERIAL

OTHER REQUIREMENTS

UN 1830

+-----+
| SECTION XIVOther Regulatory Controls
+-----+THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF
CHEMICAL SUBSTANCES.

The information contained herein is based on that data available to us and is
and is believed to be correct. However, Technical Products makes no warranty,
expressed or implied regarding the accuracy of these data or the results obtained
from the use thereof. Technical Products assumes no responsibility for injury
from the use of the product described herein.

Date prepared: 07/13/95

B E S A F E

FILTER POLYMER

TWO ALTERNATIVE FILTER POLYMERS ARE PROVIDED. ONE OF THE ALTERNATIVES WILL BE UTILIZED UPON THE INSTALLATION OF THE FILTER UNIT.

BETZ LABORATORIES, INC.
4636 SOMERTON ROAD, TREVOSE, PA. 19053
BETZ MATERIAL SAFETY DATA SHEET
EMERGENCY TELEPHONE (HEALTH/ACCIDENT) 800-877-1940

PRODUCT : POLYMER 1192

(PAGE 1 OF 3)
EFFECTIVE DATE: 11-21-91
PRINTED: 11-21-91

REVISIONS TO SECTIONS: -;EDIT:2

PRODUCT APPLICATION: COAGULANT.

-----SECTION 1-----HAZARDOUS INGREDIENTS-----

INFORMATION ON PHYSICAL HAZARDS, HEALTH HAZARDS, PEL'S AND TLV'S FOR SPECIFIC PRODUCT INGREDIENTS AS REQUIRED BY THE OSHA HAZARD COMMUNICATIONS STANDARD IS LISTED. REFER TO SECTION 4 (PAGE 2) FOR OUR ASSESSMENT OF THE POTENTIAL ACUTE AND CHRONIC HAZARDS OF THIS FORMULATION.

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY OSHA REGULATIONS.

-----SECTION 2-----TYPICAL PHYSICAL DATA-----

PH: AS IS (APPROX.)	6.3	ODOR: MILD
FL. PT. (DEG. F):	> 200	SP. GR. (70F): 1.032
VAPOR PRESSURE (mmHG):	~ 18.0	VAPOR DENSITY (AIR=1): < 1.00
VISC cps 70F:	168	% SOLUBILITY (WATER): 100.0
EVAP RATE:	< 1.00 (ETHER=1)	APPEARANCE: YELLOW
PHYSICAL STATE:	LIQUID	FREEZE POINT (DEG. F): 30.00

-----SECTION 3-----REACTIVITY DATA-----

STABLE. MAY REACT WITH STRONG OXIDIZERS. DO NOT CONTAMINATE. BETZ TANK
CLEAN-OUT CATEGORY 'A'

THERMAL DECOMPOSITION (DESTRUCTIVE FIRES) YIELDS ELEMENTAL OXIDES.

PRODUCT : POLYMER 1192

---SECTION 4-----HEALTH HAZARD EFFECTS-----
ROUTE SKIN EFFECTS *** PRIMARY ROUTE OF EXPOSURE
MAY CAUSE SLIGHT IRRITATION TO THE SKIN
TE EYE EFFECTS ***
MAY CAUSE MODERATE IRRITATION TO THE EYES.
UTE RESPIRATORY EFFECTS ***
MISTS/AEROSOLS MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT
ONIC EFFECTS OF OVEREXPOSURE***
NO EVIDENCE OF POTENTIAL CHRONIC EFFECTS.
DICAL CONDITIONS AGGRAVATED ***
NOT KNOWN
SYMPTOMS OF EXPOSURE ***
MAY CAUSE REDNESS OR ITCHING OF SKIN.

---SECTION 5-----FIRST AID INSTRUCTIONS-----
EYE CONTACT ***
REMOVE CONTAMINATED CLOTHING. WASH EXPOSED AREA WITH A LARGE QUANTITY OF
SOAP SOLUTION OR WATER FOR 15 MINUTES
EYE CONTACT***
IMMEDIATELY FLUSH EYES WITH WATER FOR 15 MINUTES. IMMEDIATELY CONTACT A
PHYSICIAN FOR ADDITIONAL TREATMENT
INHALATION EXPOSURE***
REMOVE VICTIM FROM CONTAMINATED AREA TO FRESH AIR. APPLY APPROPRIATE
FIRST AID TREATMENT AS NECESSARY
INGESTION***
DO NOT FEED ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSIVE VICTIM
DILUTE CONTENTS OF STOMACH. INDUCE VOMITING BY ONE OF THE STANDARD
METHODS. IMMEDIATELY CONTACT A PHYSICIAN

---SECTION 6-----SPILL, DISPOSAL AND FIRE INSTRUCTIONS-----
SPILL INSTRUCTIONS***
VENTILATE AREA, USE SPECIFIED PROTECTIVE EQUIPMENT. CONTAIN AND ABSORB
ON ABSORBENT MATERIAL. PLACE IN WASTE DISPOSAL CONTAINER. THE WASTE
CHARACTERISTICS OF THE ABSORBED MATERIAL, OR ANY CONTAMINATED SOIL
SHOULD BE DETERMINED IN ACCORDANCE WITH RCRA REGULATIONS.
FLUSH AREA WITH WATER. WET AREA MAY BE SLIPPERY. SPREAD SAND/GRIT.
DISPOSAL INSTRUCTIONS****
WATER CONTAMINATED WITH THIS PRODUCT MAY BE SENT TO A SANITARY
SEWER TREATMENT FACILITY, IN ACCORDANCE WITH ANY LOCAL AGREEMENT, A
PERMITTED WASTE TREATMENT FACILITY OR DISCHARGED UNDER A NPDES PERMIT
PRODUCT (AS IS) -
INCINERATE OR BURY IN APPROVED LANDFILL
FIRE EXTINGUISHING INSTRUCTIONS***
FIREFIGHTERS SHOULD WEAR POSITIVE PRESSURE SELF-CONTAINED BREATHING
APPARATUS (FULL FACE-PIECE TYPE). PROPER FIRE EXTINGUISHING MEDIA:
DRY CHEMICAL/CO2/FOAM OR WATER. SLIPPERY CONDITION. USE SAND/GRIT

PRODUCT : POLYMER 1192

-----SECTION 7-----SPECIAL PROTECTIVE EQUIPMENT-----
 USE PROTECTIVE EQUIPMENT IN ACCORDANCE WITH 29CFR SECTION 1910.132-134. USE
 RESPIRATORS WITHIN USE LIMITATIONS OR ELSE USE SUPPLIED AIR RESPIRATORS.

VENTILATION PROTECTION***

ADEQUATE VENTILATION

RECOMMENDED RESPIRATORY PROTECTION***

IF VENTILATION IS INADEQUATE OR SIGNIFICANT PRODUCT EXPOSURE IS LIKELY,
 USE A RESPIRATOR WITH DUST/MIST FILTERS.

RECOMMENDED SKIN PROTECTION***

RUBBER GLOVES

WASH OFF AFTER EACH USE REPLACE AS NECESSARY.

RECOMMENDED EYE PROTECTION***

SPLASH PROOF CHEMICAL GOGGLES

-----SECTION 8-----STORAGE AND HANDLING PRECAUTIONS-----
 STORAGE INSTRUCTIONS***

KEEP CONTAINERS CLOSED WHEN NOT IN USE.

PROTECT FROM FREEZING

HANDLING INSTRUCTIONS***

NORMAL CHEMICAL HANDLING

 THIS MSDS WAS WRITTEN TO COMPLY WITH THE OSHA HAZARD COMMUNICATION STANDARD

APPENDIX: REGULATORY INFORMATION

THE CONTENT OF THIS APPENDIX REPRESENTS INFORMATION KNOWN TO BETZ ON THE
 EFFECTIVE DATE OF THIS MSDS. THIS INFORMATION IS BELIEVED TO BE ACCURATE.
 ANY CHANGES IN REGULATIONS WILL RESULT IN UPDATED VERSIONS OF THIS DOCUMENT.

...TSCA: ALL COMPONENTS OF THIS PRODUCT ARE LISTED IN THE TSCA INVENTORY
 ...CLEARANCE FOR POTABLE WATER USE:

EPA UP TO 50PPM-ALSO FLORIDA

...REPORTABLE QUANTITY(RQ) FOR UNDILUTED PRODUCT:

NO REGULATED CONSTITUENT PRESENT AT OSHA THRESHOLDS

...RCRA: IF THIS PRODUCT IS DISCARDED AS A WASTE, THE RCRA HAZARDOUS WASTE
 IDENTIFICATION NUMBER IS: NOT APPLICABLE

...DOT HAZARD/UN#/ER GUIDE# IS : NOT APPLICABLE

...CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) MATERIALS:
 NO REGULATED CONSTITUENT PRESENT AT OSHA THRESHOLDS

...SARA SECTION 302 CHEMICALS:

NO REGULATED CONSTITUENT PRESENT AT OSHA THRESHOLDS

...SARA SECTION 313 CHEMICALS:

NO REGULATED CONSTITUENT PRESENT AT OSHA THRESHOLDS

...SARA SECTION 312 HAZARD CLASS: PRODUCT IS NON-HAZARDOUS UNDER SECTION
 11/312

...MICHIGAN CRITICAL MATERIALS:

NO REGULATED CONSTITUENT PRESENT AT OSHA THRESHOLDS

NFPA/HMIS : HEALTH - 1; FIRE - 1; REACTIVITY - 0; SPECIAL - NONE; PE - B

MATERIAL SAFETY DATA SHEET



PRODUCT

NALCOLYTE 8102 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCOLYTE 8102 COAGULANT

DESCRIPTION: An aqueous solution of a polyquaternary amine

IFPA 704M/HMIS RATING: 1/1 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard.

INGREDIENT(S)	CAS #	APPROX. %
Sodium chloride	7647-14-5	1-10

SECTION 3 PRECAUTIONARY LABEL INFORMATION

CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Flush for at least 15 minutes with eyelids open. Call a physician.
SKIN: Flush with water for 15 minutes.
INGESTION: Do not induce vomiting. Give water. Call a physician.
INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause mild irritation.
SKIN CONTACT: Can cause mild, short-lasting irritation.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCOLYTE 8102 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 5 HEALTH EFFECTS INFORMATION

(CONTINUED)

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have been conducted on this product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD50 = 8,765 mg/kg

95% Confidence Limit = 7,070 - 10,867 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD50 = Greater than 3,038 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 4.1/8.0 Moderately irritating

COMMENTS: Practically no irritation was noted on the intact skin sites while superficial burns were noted along the abraded skin sites.

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 17.8/110.0 Mildly irritating

COMMENTS: Irritation was noted at the one hour observation period. Minimal to moderate and decreased with time.

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Pale amber	FORM: Liquid	ODOR: Odorless
DENSITY:	9.1 lbs/gal. @ 70 Degrees F	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.1 @ 70 Degrees F	ASTM D-1298
pH (NEAT) =	4 - 5	ASTM E-70
FREEZE POINT:	14 Degrees F	ASTM D-1177
BOILING POINT:	212 Degrees F @ 760 mm Hg	ASTM D-86
FLASH POINT:	Greater than 200 Degrees F (PMCC)	ASTM D-93

NOTE: These physical properties are typical values for this product.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCOLYTE 8102 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 8 FIRE AND EXPLOSION INFORMATION

LASH POINT: Greater than 200 Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use water to cool containers exposed to fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NOx under fire conditions. If the water is driven off, the remaining organics may be ignitable.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2, NOx may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection is not normally needed since the volatility and toxicity are low. If significant mists are generated, use either a chemical cartridge respirator with a dust/mist prefilter or supplied air.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton, and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCOLYTE 8102 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 11 SPILL AND DISPOSAL INFORMATION

(CONTINUED)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

AQUATIC DATA:

96 hour static acute LC50 to Rainbow Trout = 0.42 ppm

96 hour no observed effect concentration is 0.18 ppm based on no mortality or abnormal effects.

TOXICITY RATING: Extremely toxic

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED
DURING TRANSPORTATION



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCOLYTE 8102 COAGULANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Sodium chloride - Eye irritant

CERCLA, 40 CFR 117, 302:

Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986

(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- XX Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act:

When use situations necessitate compliance with FDA regulations, this product



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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

is acceptable under 21 CFR 176.170 components of paper and paperboard in contact with aqueous and fatty foods.

INTERNATIONAL SANITATION FOUNDATION (ANSI/NSF STANDARD 60):

This product has received NSF/International certification under ANSI/NSF Standard 60 in the coagulation and flocculation category under the official chemical name of poly (diallyldimethyl ammonium chloride) (pDADMAC). Maximum product application dosage is 15 mg/l. Only products manufactured at Plant #9 USA and whose container label bears the ANSI/NSF Mark may be used in potable water treatment applications.

AMERICAN WATER WORKS ASSOCIATION (AWWA):

This product meets the requirements for ANSI/AWWA Standard B451-87.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:

Consult Section 11 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15

(formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):

None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments),

Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):

This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Polyquaternary amine	Trade secret
Sodium chloride	7647-14-5
Water	7732-18-5



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SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillan Publishing Company, Inc., N. Y., 2nd edition, 1980.

CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 1981.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO MAN, Geneva: World Health Organization, International Agency for Research on Cancer, 1972-1977.

PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 3rd edition, Vol. 2 A-C, 1981.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE



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SECTION 17 BIBLIOGRAPHY

(CONTINUED)

WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.

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